



CLARK COUNTY DEPARTMENT OF BUILDING

TYPICAL R-VALUES FOR FRAMED ASSEMBLIES

ROOF/CEILING						
Flat & Vaulted Ceilings			Cathedral Ceilings (no attic)			
R-Value of Insulation	Trusses @ 24"	Joists @ 16"	R-Value of Insulation	Framing @ 16"		
				2 x 8	2 x 10	2 x 12
19	20.1	20.0	19	20.0	20.0	20.0
22	23.0	22.2	22	22.3	22.9	22.9
26	27.1	26.4	26	---	22.9	22.9
30	31.1	30.5	30	---	29.9	30.0
38	39.1	38.5	38	---	---	37.5

WALLS					
(Wood framed @ 16" o.c; Stucco Exterior; Gypboard Interior)					
R-Value of Insulation	Stud	¾" Stucco	½" Foam	5/8" Foam	1" Foam
11	2 x 4	10.75	12.60	13.10	14.60
13	2 x 4	12.00	13.85	14.35	15.85
15	2 x 4	13.17	15.02	15.52	17.02
19	2 x 6	16.25	18.05	18.55	20.05
21	2 x 6	18.13	19.98	20.48	21.98
*11	2 x 4	11.20	(Garage/House Common Wall)		

FLOOR	
(Over Unheated Area)	
R-Value of Insulation	Assembly R-Value
11	12.5
13	14.1
19	20.1
30	29.4
38	36.6

DOORS			
	Wood 1-3/8	Wood 1-3/4	Metal 1-3/4
7/16 Panel	1.75	1.75	---
1-1/8 Panel	---	2.56	---
Flush hollow	2.13	2.17	---
Flush solid	2.56	3.03	---
Mineral fiber w/o thermal break			1.67
Foam core w/ thermal break			5.00

WINDOWS					
Manufactured Fenestration Product Default U-Values					
Framing Materials	Any Metal		Thermal Break	Non-Metal	
Layers	Single	Double	Double	Single	Double
Operable Windows	1.28	0.87	0.71	0.92	0.60
Fixed Window	1.19	0.72	0.60	1.04	0.57
Patio Door	1.25	0.77	0.68	0.99	0.55
Skylights	1.26	0.80	0.70	0.91	0.55
Greenhouse Windows	2.26	1.40	1.12	1.94	1.06



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1. The minimum design characteristics to qualify as a *Thermal Break* product are:
 - a) Material used as the thermal break must have a thermal conductivity of not more than 3.6 btu-inch/hr/sq ft.
 - b) Thermal break must produce a gap not less than 0.210 inches, and;
 - c) All metal members of the product exposed to interior and exterior air must incorporate a thermal break meeting the criteria in (a) and (b) above.
 - d) Product must be clearly labeled by the manufacturer that it qualifies as a thermally broken product.
2. Non-metal products can include metal fasteners, hardware and door thresholds.
3. Add 0.04 to the listed U-value for any products that have metal cladding in any configuration.
4. For all dual glazed fenestration products, adjust the listed U-value as follows:
 - a) Subtract 0.05 for spacers of 7/16" or wider
 - b) Subtract 0.05 for low-e glazing
 - c) Add 0.05 for products with dividers between panes if the spacer is less than 7/16" wide
 - d) Add 0.05 to any product with true divided lites (dividers through the panes)